

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-10 (Cancelled)

11. (Currently amended) A radio wave lens antenna comprising:

a hemispherical radio wave lens for focusing radio wave beams;

a reflective plate attached to a half-cut surface of the sphere of the radio wave lens for reflecting radio waves incoming from the sky or radiated toward targets; and

primary feeds positioned at arbitrary radio wave focus points of the radio wave lens for transmitting or receiving the radio waves,

~~wherein each primary feed includes a dielectric loaded waveguide antenna where a~~  
~~dielectric body is loaded at an end opening of a waveguide and two of~~ the primary feeds include  
at least one pair of ~~the primary feeds are installed closely and~~ each of the two closely disposed  
primary feeds includes a dielectric loaded waveguide antenna where a dielectric body is loaded  
at an end opening of a waveguide, a center of the end of the dielectric body being located off the  
extension of the waveguide's center axis and the ~~centers of the ends of the dielectric bodies of~~  
~~the two closely disposed primary feeds are~~ being ~~disposed at off-centered positions in a direction~~  
such that the centers are remotely spaced apart from each other to be located off the extension of  
~~each waveguide's center axis.~~

12. (Currently amended) A radio wave lens antenna comprising:

a spherical radio wave lens for focusing radio wave beams; and  
 primary feeds positioned at arbitrary radio wave focus points of the radio wave lens for transmitting or receiving the radio waves,

~~wherein each primary feed includes a dielectric-loaded waveguide antenna where a dielectric body is loaded at an end opening of a waveguide and two of the primary feeds include at least one pair of the primary feeds are installed closely and each of the two closely disposed primary feeds includes a dielectric loaded waveguide antenna where a dielectric body is loaded at an end opening of a waveguide, a center of the end of the dielectric body being located off the extension of the waveguide's center axis and the centers of the ends of the dielectric bodies of the two closely disposed primary feeds are being disposed at off-centered positions in a direction such that the centers are remotely spaced apart from each other to be located off the extension of each waveguide's center axis.~~

13. (Previously presented) The radio wave lens antenna of claim 11, wherein the dielectric-loaded waveguide antenna is a dielectric-loaded rectangular waveguide antenna where the dielectric body is loaded at the end opening of a rectangular waveguide.

14. (Previously presented) The radio wave lens antenna of claim 12, wherein the dielectric-loaded waveguide antenna is a dielectric-loaded rectangular waveguide antenna where the dielectric body is loaded at the end opening of a rectangular waveguide.

15. (Previously presented) The radio wave lens antenna of claim 11, wherein the dielectric body of the dielectric-loaded waveguide antenna is protruded forward from the waveguide and a protruded portion of the dielectric body is of a taper shape having a thinned end.

16. (Previously presented) The radio wave lens antenna of claim 12, wherein the dielectric body of the dielectric-loaded waveguide antenna is protruded forward from the waveguide and a protruded portion of the dielectric body is of a taper shape having a thinned end.

17. (Currently amended) The radio wave lens antenna of claim 11, wherein the dielectric body is protruded forward from the waveguide and a part of an outer periphery of a protruded portion of the dielectric body is removed along a plane of a direction intersecting a cross section of the waveguide normal to the center axis thereof.

18. (Currently amended) The radio wave lens antenna of claim 12, wherein the dielectric body is protruded forward from the waveguide and a part of an outer periphery of a protruded portion of the dielectric body is removed along a plane of a direction intersecting a cross section of the waveguide normal to the center axis thereof.

19. (Currently amended) The radio wave lens antenna of claim 15, wherein in a plane including a cross section of the protruded portion of the dielectric body protruded forward from the waveguide, a dimension of the protruded portion in a disposed direction of the two primary feeds is smaller than that in a direction normal to the disposed direction of the two primary feeds, the cross section of the protruded portion being normal to the waveguide's center axis.

20. (Currently amended) The radio wave lens antenna of claim 16, wherein in a plane including a cross section of the protruded portion of the dielectric body protruded forward from the waveguide, a dimension of the protruded portion in a disposed direction of the two primary feeds is smaller than that in a direction normal to the disposed direction of the two primary feeds, the cross section of the protruded portion being normal to the waveguide's center axis.

21. (Currently amended) The radio wave lens antenna of claim 17, wherein in a plane including a cross section of the protruded portion of the dielectric body protruded forward from the waveguide, a dimension of the protruded portion in a disposed direction of the two primary feeds is smaller than that in a direction normal to the disposed direction of the two primary feeds, the cross section of the protruded portion being normal to the waveguide's center axis.

22. (Currently amended) The radio wave lens antenna of claim 18, wherein in a plane including a cross section of the protruded portion of the dielectric body protruded forward from the waveguide, a dimension of the protruded portion in a disposed direction of the two primary feeds is smaller than that in a direction normal to the disposed direction of the two primary feeds, the cross section of the protruded portion being normal to the waveguide's center axis.

23. (Previously presented) The radio wave lens antenna of claim 15, wherein an end of the dielectric body protruded from the waveguide is cut out such that the end of the dielectric body is of flat or a round shape.

24. (Previously presented) The radio wave lens antenna of claim 16, wherein an end of the dielectric body protruded from the waveguide is cut out such that the end of the dielectric body is of flat or a round shape.

25. (Previously presented) The radio wave lens antenna of claim 17, wherein an end of the dielectric body protruded from the waveguide is cut out such that the end of the dielectric body is of flat or a round shape.

26. (Previously presented) The radio wave lens antenna of claim 18, wherein an end of the dielectric body protruded from the waveguide is cut out such that the end of the dielectric body is of flat or a round shape.

27. (Previously presented) The radio wave lens antenna of claim 19, wherein an end of the dielectric body protruded from the waveguide is cut out such that the end of the dielectric body is of flat or a round shape.

28. (Previously presented) The radio wave lens antenna of claim 20, wherein an end of the dielectric body protruded from the waveguide is cut out such that the end of the dielectric body is of flat or a round shape.

29. (Previously presented) The radio wave lens antenna of claim 21, wherein an end of the dielectric body protruded from the waveguide is cut out such that the end of the dielectric body is of flat or a round shape.

30. (Previously presented) The radio wave lens antenna of claim 22, wherein an end of the dielectric body protruded from the waveguide is cut out such that the end of the dielectric body is of flat or a round shape.